

100917950
AP20R0011010 06 MAY 2006

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Yasushi KUSAKA et al.

Attn: PCT Branch

Application No. New U.S. National Stage of PCT/JP2004/018684

Filed: May 2, 2006

Docket No.: 127929

For: VALVE GEAR


**TRANSMITTAL OF THE ANNEXES TO THE
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached hereto are the annexes to the International Preliminary Report on Patentability (Form PCT/IPEA/409). The attached material replaces the material in the claims at page 33, line 1 (starting with the words "the valve.") to page 34, line 25.

Respectfully submitted,


James A. Oliff
Registration No. 27,075

Jesse O. Collier
Registration No. 53,839

JAO:JOC/nxy

Date: May 2, 2006

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

**DEPOSIT ACCOUNT USE
AUTHORIZATION**

Please grant any extension
necessary for entry;
Charge any fee due to our
Deposit Account No. 15-0461

10/577950

IAP20050500000000 MAY 2006

33

the valve.

4. A valve gear of an internal combustion engine converting a rotational motion of an electric motor into a linear motion by a cam, and driving a valve of a cylinder so as to be opened and closed based on the linear motion, the valve gear comprising:

electric motor control means capable of actuating the electric motor in a forward rotating drive mode in which the cam is continuously rotated in one direction,

wherein the electric motor control means comprises forward rotating control means for changing a rotating speed of the cam before the valve starts lifting in the forward rotating drive mode so as to change a working angle of the valve.

5. The valve gear according to claim 4, wherein the forward rotating control means changes the rotating speed of the cam to a predetermined speed which is different from a basic speed obtained by dividing a rotating speed of an engine output shaft of the internal combustion engine by a rotation number of the engine output shaft from a start of an intake stroke to an end of an exhaust stroke, before starting the lift of the valve, and rotates the cam at the predetermined speed during the lift of the valve.

6. A valve gear of an internal combustion engine converting a rotational motion of an electric motor into a linear motion by a cam, and driving a valve of a cylinder so as to be opened

and closed based on the linear motion, comprising:

electric motor control means capable of actuating the electric motor in each of a forward rotating drive mode in which the cam is continuously rotated in one direction, and a rocking drive mode in which a rotating direction of the cam is changed during a lift of the valve,

wherein the electric motor control means comprises changing control means for controlling a motion of the electric motor in at least any one of the rocking drive mode and the forward rotating drive mode such that a time area obtained by integrating a lift amount of the valve approximately coincides between before and after changing the mode, at the time of changing the rocking drive mode and the forward rotating drive mode.

7. The valve gear according to claim 6, wherein the changing control means control the motion of the electric motor in the rocking drive mode such that a maximum lift amount of the valve in the rocking drive mode is increased according to being closer to the changing time of the mode.

8. The valve gear according to claim 7, wherein the changing control means controls an opening degree of a throttle valve of the internal combustion engine such that the opening degree of the throttle valve is reduced according to an increase of the maximum lift amount.

9. (new) The valve gear according to claim 1, wherein the rocking

34/1

control means controls the rotating speed of the cam in the rocking drive mode such that a target of a working angle of the valve is realized and a target of a time area obtained by integrating a lift amount of the valve is realized.

10. (new) The valve gear according to claim 4, wherein the forward rotating control means changes the rotating speed of the cam in the forward rotating drive mode such that a target of a working angle of the valve is realized and a target of a time area obtained by integrating a lift amount of the valve is realized.